

REMARKS/ARGUMENT

Applicant responds herein to the Office Action dated July 13, 2001.

Claims 1-60 stand rejected on grounds of obviousness over Beck, et al. (U.S. Patent no. 6,138,139) in view of Li (U.S. Patent no. 6,144,954). Reconsideration is requested in view of the amendments and remarks herein.

The inventions in applicant's various claims generally relate to the overall management of the financial costs of ownership of the hardware and software which constitute a "computer data center". A "computer data center" refers (see the opening paragraphs of the present specification) to what is essentially a computer installation consisting of various processors, CPUs, special controllers, storage devices, printers, monitors and other peripherals. A particular data center can consist of a variety, or a mix of computers and storage devices located in one geographical location or a network of computers and peripherals which are geographically dispersed, but which operate as a data center unit or installation.

In accordance with one aspect thereof, the invention is a modeling system that helps or enables the automatic, or at least semiautomatic, and interactive configuring of a computer data center from the perspective of attempting to predict the "costs of ownership" thereof. This term means more than the adding up the costs of various pieces of hardware or software. It is a modeling system that takes into account the cost of ownership which can include such items or parameters as leasing costs, rental costs, energy costs, maintenance costs, and the like.

The system of the present invention allows the user thereof to create many different configurations, i.e., what-if scenarios, of data centers, choosing and selecting or exchanging different pieces of hardware and software to configure the overall computer data center, all with the aim of ultimately being able to choose a system that meets certain criteria in terms of the delivery of computing/storing power and cost of operation.

By way of example, claim 1 is directed to "the method for assessing the financial cost of ownership of a configuration of at least one computer data center...".

The method includes: "modeling elements of a data center configuration on a computer by identifying to the computer the elements of a given configuration." Thus, the first step comprises the steps of the operator working through an input device into the computer or through

an automated tool to select a plurality of elements which are intercoupled with one another, e.g., various pieces of hardware or software.

Secondly, a knowledge base contains financial information which contains "...financial information which reflects financial ownership costs of the elements..." "including substantially all of the modeled elements of the given configuration".

The method then operates "correlating software" that correlates information stored in the knowledge base with the elements that have been selected for a particular configuration. Ultimately, the method of the invention produces an output that provides the required information, e.g., the financial cost of ownership.

It is respectfully submitted that the prior art of record comes nowhere close to suggesting the elements or steps of the present invention.

The primary reference, Beck, et al., is not directed to and does not describe a computer data center. Rather, it is concerned with a "multimedia communication center". A multimedia communication center is similar to a telephone switching system, except that it can handle both voice/video information and digital data. The multimedia communications center of Beck, et al., is referred to in the industry as a system that uses CTI (Computer Telephony Integration). See column 1, lines 31-63.

The system described in this reference does not engage in any modeling, let alone modeling of actual hardware or software, in the sense of the present invention. Rather, it is a sophisticated telephone switching system. It handles telephone calls from individuals and computers, including computer-to-computer telephone calls.

Respectfully, none of the text of Beck, et al. referenced in the Office Action so much as hints at the concept of the present invention, which consists of software that enables an operator to identify or specify various pieces of hardware to the computer to then causes the computer to assemble a particular configuration and to consult an existing knowledge base which contains the costs of operation of the various pieces of hardware/software that have been selected for the purpose of arriving at a monetary figure which indicates to the user of the software, the cost of ownership of the particular configuration.

In accordance with claim 1 of the present application, the operator can specify to the computer and the computer returns, the cost of ownership over selected time periods, for example, over six months, or over a certain time of the year, etc.

Beck, et al. does not disclose the foregoing. For example, the text at page 7, lines 1-2 that the Examiner is referencing, merely states that the telephone call handling system of this reference can use a particular arrangement of hardware, such as a CTI processor 22 and a WAN (wide area network) 15 that is connected by a server 21 by a CTI link 24. But the recitation of a particular hardware does not at all reflect a software system that is capable of modeling various pieces of hardware, such as one would have at a computer data center.

The secondary reference, Li, is concerned with a system for the automatic development of computer software. As the abstract of this reference indicates, it is: "A self-optimizing method and machine that automatically develops computer software in real-time according to a specified performance by computer-generating a knowledge base associated with the computer software, by instantly computer-coding the computer-generated knowledge base into the computer software, and by saving the developed computer software in a software storage device."

Thus, Li describes creating software automatically, not modeling various pieces of software, which itself is not capable of modeling hardware or any type of computer element to create a computer data center configuration and certainly neither of the two references has any inkling of, nor discloses the overall combination of the present invention which consists of allowing the user to model the configuration of the elements and the interconnections of a hypothetical computer data center to first create a model of what a computer data center would look like and then gather information from the knowledge base that would enable the computer thereafter to provide to the user a figure of merit in terms of the cost of ownership of the specifically "modeled" computer data center configuration.

Accordingly, it is urged that the present invention is clearly defined over the prior art which nowhere suggests or intimates two key points of the present invention which include modeling of the elements for a computer data center and taking the modeled configuration and correlating it with information in a knowledge base for the purpose of obtaining the financial ownership costs thereof.

The various dependent claims in the application include the limitations of the main independent claims and impose further limitations that set them even further apart from the prior art. Accordingly, they too are patentable over the prior art. Take, for example, claim 3. It includes all the limitations of claim 2 and further provides that the modeling and configuration that takes place is defined by reference to at least "one data center location, at least one system

within the location and at least one device group with the system and at least one device within the device group". These are terms that are known to computer data center managers who appreciate the specific limitations which they impose on the invention. Nowhere in the prior art is there a discussion of such elements and for good reason. Those references do not deal with the subject matter of constructing or configuring or assembling the components for a computer data center.

Accordingly, the Examiner is respectfully requested to reconsider the application, allow the claims as amended, and pass this case to issue.

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as First Class Mail in an envelope addressed to: Asst. Commissioner for Patents, Washington, D.C. 20231, on October 15, 2001:

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Name of applicant, assignee or
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Signature

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Respectfully submitted,

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APPENDIX B
VERSION WITH MARKINGS TO SHOW CHANGES MADE
37 C.F.R. § 1.121(b)(iii) AND (c)(ii)

CLAIMS:

17. An apparatus for managing at least one of hardware and software elements of at least one computer data center, said apparatus comprising:

- a knowledge base that stores information concerning a plurality of the elements;
- a configuration storage that stores at least one configuration that defines at least one location, at least one system within the location, at least one device group within the system, and at least one device within the device group;
- a correlator that correlates information stored in said knowledge base that is associated with essentially each element of said configuration and stores said associated information in said configuration storage; and
- a display generator that generates a display comprising at least a portion of said configuration and at least a portion of said associated information; and

wherein said associated information stored in said configuration storage includes financial information concerning at least one of the location, system, device group and device of said configuration.